

MiFi™ 2200

Firmware 139



product user guide



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Product Overview

MiFi 2200 Overview
Your MiFi 2200 Intelligent Mobile Hotspot
Power Management
Using the microUSB Cable

MiFi 2200 Overview

Thank you for choosing the Novatel Wireless MiFi 2200 Intelligent Mobile Hotspot for Mobile Broadband and Wi-Fi!

This device operates over high-speed Mobile Broadband networks in the 800/1900 bands, enabling you to connect at high speeds to the Internet, your corporate Intranet, Wi-Fi enabled devices, and access your email virtually anywhere!

MiFi 2200 is an Intelligent Mobile Hotspot, empowering you with high-speed data access on your wireless data network and Wi-Fi connectivity.

Features

With the MiFi 2200, you can:

- **Connect to High Speed Wireless Data**
- **Benefit from Wi-Fi Connectivity**
 - With the MiFi 2200 Intelligent Mobile Hotspot, connect via Wi-Fi and access high speed mobile broadband service to browse the Internet, access email, run business applications and more from a computer or most Wi-Fi compatible devices.
 - The MiFi 2200 enables multiple Wi-Fi enabled devices to connect at one time, such as notebooks, desktops, tablet computers, personal digital assistants, and most Wi-Fi enabled consumer devices.
 - Typical battery usage time is 4 hours active and 40 hours standby in Wi-Fi mode (with one Wi-Fi connected device)
- **Experience NovaSpeed™ Technology**

NovaSpeed, the latest software technology from Novatel Wireless, enhances performance of streaming video, online gaming, simultaneous uploads and downloads, and large file transfers with minimal interruptions or buffering.
- **Choose between Two Operating Modes – Wi-Fi or USB Modem**
- **Manage Wireless Network Activity – MiFi Settings and MobiLink 3**
 - **MiFi Settings:** Allows you to manage, monitor, and customize your Wi-Fi and Mobile Broadband connection through an easy-to-use interface when the device is in Wi-Fi mode (i.e. without the use of the USB cable).
 - **MobiLink 3:** Included within your device for automatic installation without a CD, MobiLink 3 allows you to manage, monitor, and customize your wireless network activity through an easy-to-use interface when you are connected to your computer via USB.

Additional features include:

- Advanced embedded antenna design for Mobile Broadband and Wi-Fi
- VPN capability
- Auto installation and connectivity options
- 2-Way Short Messaging Service (SMS) (USB modem mode only)
- NDIS configuration

Package Contents

The Novatel Wireless MiFi 2200 package includes:

- MiFi 2200 Intelligent Mobile Hotspot
- AC Wall Charger
- Lithium Ion Battery
- Storage Pouch
- microUSB cable
- Quick Start Guide
- MobiLink Connection Manager software (on device)
- MobiLink 3 User Guide (on device)
- Product User Guide (on device)

System Requirements

- Internet browser (for example, Internet Explorer, Safari, Firefox, Opera, Chrome)
- Wireless interface (802.11b/g)

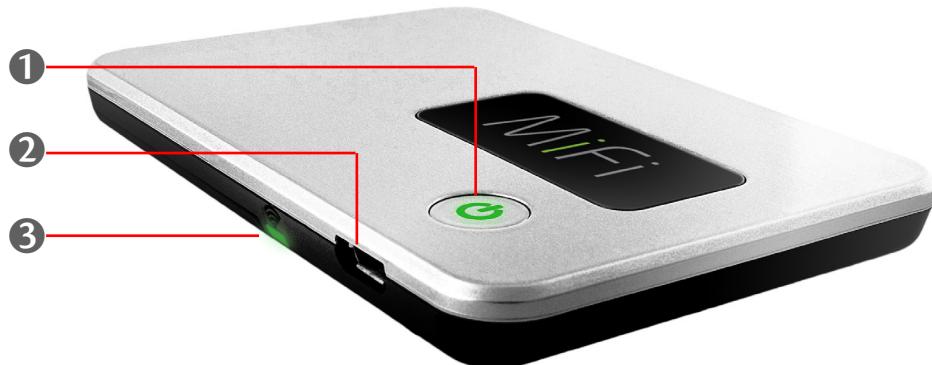
USB Modem Mode only:

- Windows 7, Vista, or XP (Service Pack 2 or higher)
- Mac OS X v10.4.11 or higher
- Type A USB port
- 40 MB hard drive space
- 256 MB RAM

NOTE MobiLink software is included on the device. No CD is required.

Your MiFi 2200 Intelligent Mobile Hotspot

Your MiFi 2200 has the following parts:



- ① **Power Button / LED:** Powers on and off the device. The LED indicates power, battery status, and roaming activity.
- ② **microUSB Connector:** The AC charger and USB cable connect here.
- ③ **Service Status LED:** Provides information about your mobile broadband connection.



- ④ **Network Name and Password Label:** The preconfigured name of your network (SSID) and your network password (also called a network key) are printed on the back of your device.
- ⑤ **Master Reset Button:** Resets device to factory default settings. [See [Use the Master Reset Button](#) (page 46).]
- ⑥ **Battery Compartment:** Battery is placed here.

LED States

The MiFi LEDs provide valuable information about the state of the device and connection.

Service Status LED

No Light	—	Device is powered off.
Green	Solid	MiFi is powered on and connected to a mobile broadband network, but is not transmitting or receiving data.
	Slow Blinking	MiFi is powered on but there is no service.
	Intermittent Blinking	MiFi is transmitting / receiving mobile broadband data. The blinking rate is proportional to the data speed.

Power Button LED

No Light	—	Device is powered off.
Green	Solid	MiFi is powered on and fully charged.
	Glowing	MiFi is in standby mode (power saving). Press the power button to wake up the device.
Red	Blinking	Battery is critically low.
Amber	Solid	Battery is charging.
	Blinking	Error. [See Troubleshooting (page 41).]
Blue	Solid	MiFi is powered on and roaming.

Caring for Your Device

As with any electronic device, the MiFi 2200 must be handled with care to ensure reliable operation. Novatel Wireless recommends the following handling guidelines:

- Do not apply adhesive labels to the MiFi 2200; they may cause the device to potentially overheat and they may alter the performance of the antenna system.
- The USB connector should plug easily into your computer's Type A USB port. Forcing the device into a port may damage the connector.
- Protect the MiFi 2200 from liquids, dust, and excessive heat.
- Store the MiFi 2200 in a safe place, when not in use.

Power Management

Your device will work from its battery or when plugged into a power source.

- **Battery** — The battery will last for up to four hours. Charge the battery by plugging in the AC adapter. While the battery is charging the Power Button LED will be solid amber. When the battery is fully charged, it will be solid green.
- **Wall power** — Use the device by plugging it into a wall socket. The MiFi battery will charge while it is plugged in.
- **USB power from a computer** — Use the device as a USB modem while plugged into the USB port of a computer using the supplied USB cable. The battery will charge while it is plugged in. Charging the battery through the USB port is slower than charging it with AC power.

NOTE

You cannot use the MiFi in WiFi mode while it is plugged into a USB port.

Using the Battery

WARNING! To avoid risk of explosion, never dispose of batteries in a fire.

- Battery life depends on the network, signal strength, temperature, features, and accessories used.
- Always use Novatel Wireless original batteries and chargers. The warranty does not cover damage caused by non-Novatel Wireless batteries and/or chargers.
- New batteries or batteries stored for a long time may take more time to charge.
- When charging your battery, keep it near room temperature.
- When storing your battery, keep it uncharged in a cool, dark, dry place.
- Never expose batteries to temperatures below -10°C (14°F) or above 45°C (113°F). Never leave the device in an unattended vehicle since temperatures may be outside the temperature range for this device.
- It is normal for batteries to gradually wear down and require longer charging times. If you notice a change in your battery life, it is probably time to purchase a new battery.
- Some batteries perform best after several full charge/discharge cycles.

NOTE

Contact your local recycling center for proper battery disposal.

Before using the MiFi 2200, read the battery safety information in the "Safety Hazards" section of this guide. [See [Proper Battery Use and Disposal](#) (page 53).]

Powering the MiFi 2200 On and Off

To power the device on:

- Press the Power button until the Power LED lights up solid green.

To power the device off:

- ① If the device is plugged into your computer with the USB Cable, unplug the USB cable from the device first.
- ② Press the Power button until the Power LED shuts off.

Using the microUSB Cable

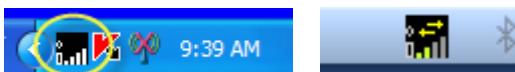
Properly Connect the MiFi 2200 with the microUSB Cable

- ① Grip the MiFi 2200 by its sides and gently insert the USB Cable into the microUSB port.
- ② Insert the other end of the cable in a Type A USB port. The cable should fit easily into the USB port.



The following occurs:

- ① The status icon appears in the system tray / notification area (Windows) or in the menu bar (Mac).



- ② MiFi 2200 is powered on automatically and begins charging.

IMPORTANT The recommended minimum distance between you and the device is 8 inches. Extend the microUSB cable so the MiFi is at least 8 inches from your body.

Properly Disconnect from a USB Modem Mode Connection

Note Before unplugging the MiFi 2200, disconnect your Internet connection and exit MobiLink.

Windows

- ① End your session by selecting **Disconnect** from MobiLink.
- ② Exit MobiLink.
- ③ Right-click the **Safely Remove Hardware** icon in the notification area, click **Safely Remove Hardware**, click the device, and then click **Stop**.
- ④ Pull the cable straight out from both the MiFi 2200 and the computer.
- ⑤ The device remains powered on until you press and hold the power button to turn it off.

Mac OS X

- ① End your session by selecting **Disconnect** from MobiLink.
- ② Exit MobiLink.
- ③ Right-Click (Command-Click) the MobiLink desktop icon and select **Eject**.
- ④ Pull the cable straight out from both the MiFi 2200 and the computer.
- ⑤ The device remains powered on until you press and hold the power button to turn it off.

2

Using Your MiFi 2200

[Using Your MiFi for the First Time](#)

[Connect in WiFi Mode](#)

[Connect in USB Modem Mode](#)

[Access the User Guides](#)

Using Your MiFi for the First Time

IMPORTANT The MiFi 2200 requires an activated account with a network operator in order to function.

Inserting and Charging the Battery

- 1 Open the battery compartment, located on the bottom of the device.



- 2 Insert the battery by lining up the gold contact points on the battery with the gold contact points in the battery compartment.



③ Once the battery is secure, place the battery cover back on the device until it locks into place.



④ Connect the microUSB end of the AC wall charger to the microUSB port of the device as shown.



⑤ Plug the other end of the AC wall charger into the appropriate electrical outlet. Charge for at least two and a half hours.

CAUTION! Use only an approved charging accessory to charge your device. Use of an incompatible charger may cause damage to your device and void the warranty.

Powering the MiFi 2200 On and Off

To power the device on:

► Press the Power button until the Power LED lights up solid green.

To power the device off:

- ① If the device is plugged into your computer with the USB Cable, unplug the USB cable from the device first.
- ② Press and hold the Power button until the Power LED shuts off.

Connect in WiFi Mode

IMPORTANT Your MiFi came preconfigured with a secure network name and password to prevent unauthorized access to your mobile broadband service. The unique network name (SSID) and network password (also called a network key) are printed on the back of the device. You will need this information to continue.

- 1 Press the power button.

Your MiFi powers on and starts up. When the power LED is solid green (or amber) and the status LED is solid green, the device is ready to connect.

- 2 Use your normal WiFi manager on your computer to locate the MiFi network name (from the back of your device) and select it.

Tip! The steps to connect to a WiFi network vary by operating system and whether you use the native application or third-party software. Consult your computer help system if you need assistance.

- 3 Click **Connect**.

- 4 Enter the password when requested. (Your operating system may ask for a network or security key.)

The status LED will blink to show that data is being transmitted and received between the MiFi and your computer.

If you want to change the settings of your MiFi (such as security type), follow the instructions for using the MiFi Settings.

The MiFi Settings allow you to see status information and manage many aspects of your network and MiFi device. [See [MiFi Settings](#) (page 21).]

Connect in USB Modem Mode

MobiLink is a multi-platform application for Windows, Mac OS X, and Linux with common software, the Connection Manager, for all three operating systems.

The MiFi 2200 is pre-configured with MobiLink software, so no installation CD is needed. On Windows, the MiFi 2200 automatically installs MobiLink the first time it is inserted into the computer's USB port. On Mac OS X, the MiFi 2200 opens a Finder window with an installer package the first time it is inserted into the computer's USB port.

NOTE You cannot use the MiFi in WiFi mode while it is plugged into a USB port.

Install the Software and Drivers

NOTE Mac users will need to restart the computer.

- ① Turn on your computer and close all applications.
- ② Power off the MiFi.
- ③ Connect it to the computer using the provided USB cable.
 - » Windows users: The installation program will launch automatically.
 - » Mac users: A Finder window opens to show a package icon. Double-click the icon to launch the installer.



- ④ Follow the instructions on the screen.
- ⑤ Mac users need to restart the computer and open MobiLink from the Applications folder.

Tip!

Mac users: The MobiLink Dock icon is a convenient way to open the software if you keep it in the Dock. After MobiLink is open, click and hold the MobiLink icon until the Dock icon menu opens, and then select **Keep in Dock** (Tiger and Leopard) or **Options > Keep in Dock** (Snow Leopard).

After the software is installed:

- **Windows users:**

- A MobiLink shortcut is placed on the desktop.



- A MobiLink status icon appears in the Windows notification area (system tray).



- **Mac users:** (after the computer is restarted, and the MobiLink application is open)

- A MobiLink icon is placed in the Dock.

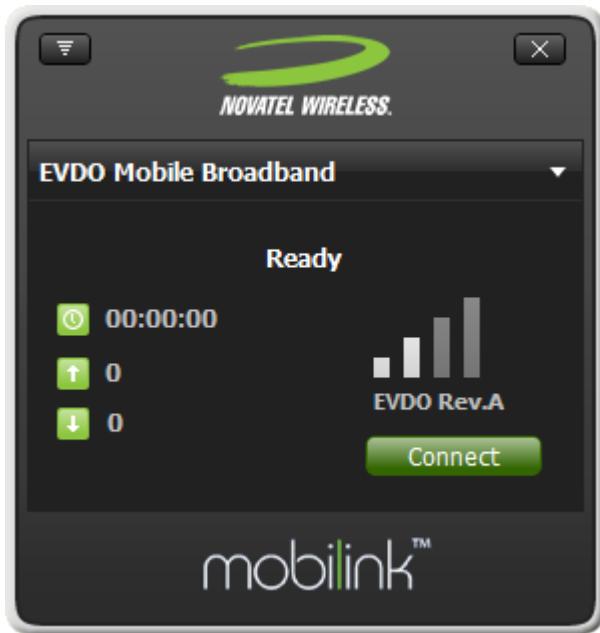


- A MobiLink status icon appears on the right side of the menu bar.

**Tip!**

Mac users: The MobiLink Dock icon is a convenient way to open the software if you keep it in the Dock. After MobiLink is open, click and hold the MobiLink icon until the Dock icon menu opens, and then select **Keep in Dock** (Tiger and Leopard) or **Options > Keep in Dock** (Snow Leopard).

- **Both Windows and Mac users:** The MobiLink Connection Manager opens

**NOTE**

Some accounts might require activation from your network operator. If the Connection Manager says **Device is not activated**, click the **Activation** button and follow the onscreen instructions.

Connect and Disconnect from the Network

If the icon is present in the notification area (Windows) or menu bar (Mac), the MobiLink software is running.

To launch the software:

- Windows: Double-click the desktop shortcut.
- Mac: Launch the software from the Applications folder.

To connect to or disconnect from the network:

- Windows: Right-click the icon in the notification area and select **Connect** or **Disconnect**.
- Mac: Command-click the icon in the menu bar and select **Connect** or **Disconnect**.

Detailed instructions for using the MobiLink Connection Manager software can be found in the MobiLink 3 User Guide. [See [Access the User Guide](#) (page 20).]

Access the User Guide

Your device includes a User Guide for the MobiLink 3 software, which is accessible after MobiLink has been installed:

Windows users: The user guide is installed into the MobiLink folder located at **Start>All Programs>Novatel Wireless>MobiLink3.**

Mac users: The user guide is installed into the documentation library (**users/____/Library/Documentation/Novatel/**) and a link is placed on the desktop.

3

MiFi Settings

[MiFi Settings Basics](#)

[Home Page](#)

[WiFi](#)

[LAN](#)

[Security](#)

[Advanced](#)

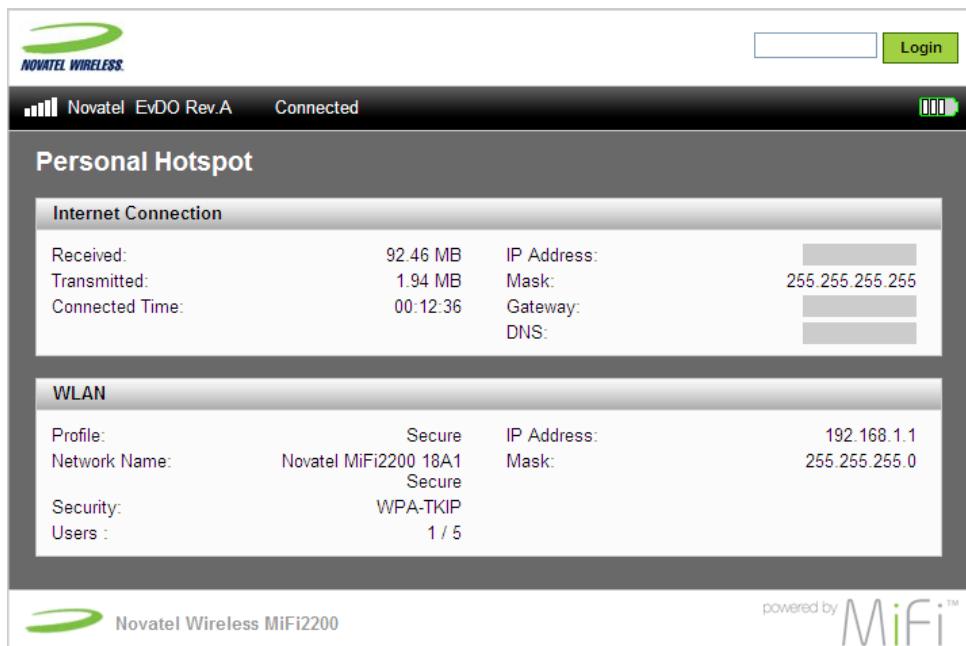
MiFi Settings Basics

MiFi uses a browser interface that allows you to configure the device and access its many features. Using your Web browser, you can open the MiFi Home page that gives you access to the many features of the device. For example, you can do the following:

- View the status of the wireless network, your internet connection, the battery, and the MiFi itself.
- Set up wireless security to safeguard your files.
- Set up a temporary hotspot to allow a maximum of 5 devices to connect to your MiFi without sharing your network name and network password (key).
- Set up to allow VPN connections to your office.
- Set up additional security to only allow certain applications out of your network (port filtering) or to allow certain applications into your network (port forwarding—required by some online games, for example).

Login to MiFi Settings

- ① Open your web browser and enter <http://192.168.1.1> into the address window and press **Enter** or **Return**.



- ② Type the administrative password into the Login box in the upper right corner and click **Login**. (The default administrative password is “admin”.)

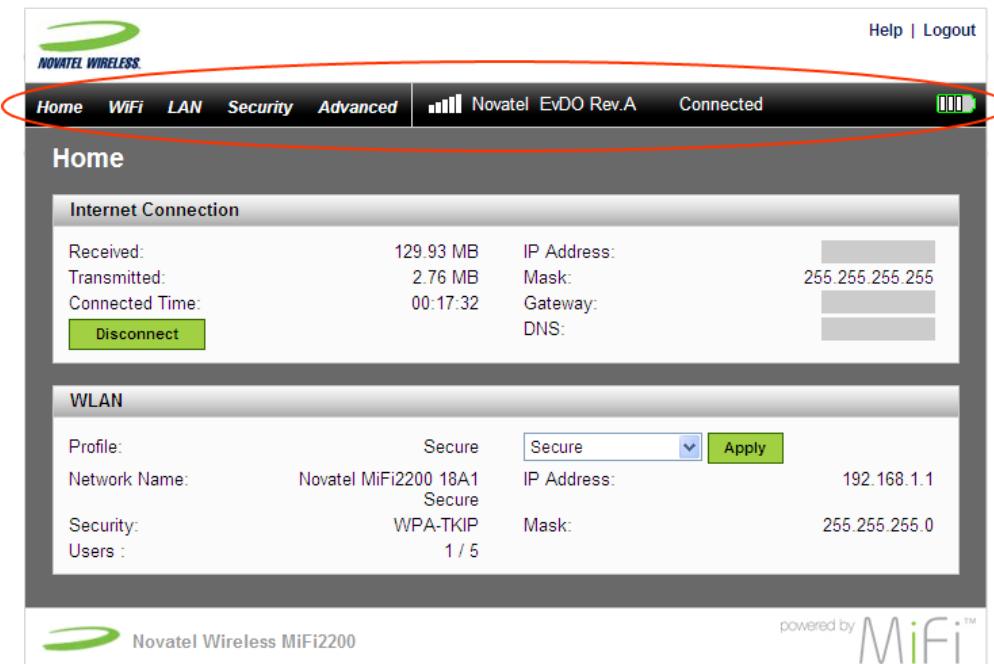
The Home page will open.

Home Page

The Home page is the first page you see after logging in. It is the main point of entry for all your work with MiFi Settings.

Menu Bar

The menu bar runs horizontally across the top of each page of MiFi Settings. In addition to allowing you to select menu items, the menu bar also displays information about your device's connection strength and battery level.



Home Page Sections

The Home page is divided into two sections.

Internet Connection

The Internet Connection section gives you status information about your current network connection and allows you to connect or disconnect from the network.

- The number of bytes received and transmitted
- The duration of the current connection
- The IP address and subnet mask of your connection
- The DNS address and gateway of your connection

You can use the Connect / Disconnect button to manage your network connection.

WLAN

The WLAN section gives you status information about your MiFi and allows you to select a different wireless profile.

- The profile currently in use
- The network name (also known as the SSID)
- The security method in use
- The number of users currently connected to your MiFi.
- The IP address and subnet mask for MiFi Settings.

You can use the drop-down menu and Apply button to select a different profile without leaving the Home page.

IMPORTANT Do not select "Temporary Hotspot" using this menu. You will not know what the settings are and will be unable to reconnect to the device. If this happens, you will need to use the master reset button. [See [Use the Master Reset Button](#) (page 46).]

To change WLAN settings, use the WiFi menu. [See [WiFi](#) (page 25).]

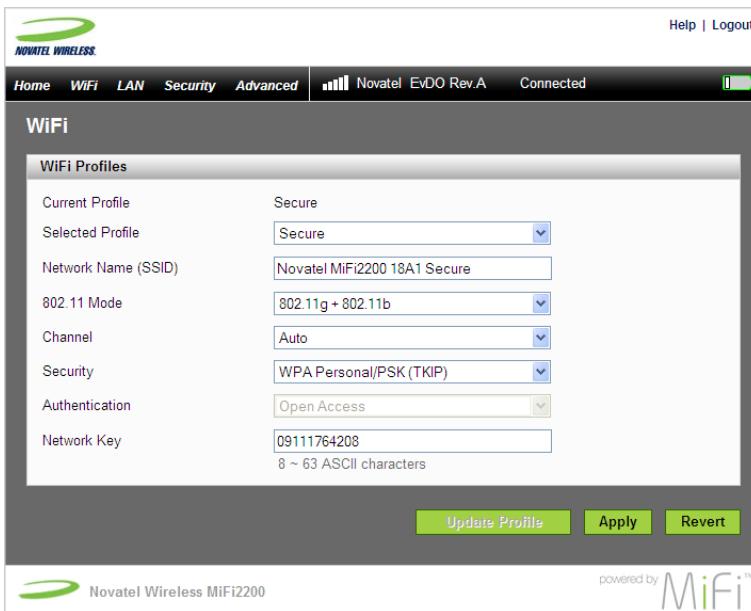
WiFi

The WiFi Profiles page allows you to configure your secure profile or set up a temporary hotspot.

From this page you can:

- [Choose a Profile](#)
- [Change Security Settings](#)
- [Set Up a Temporary Hotspot](#)

► Choose **WiFi** from the menu bar to open the WiFi Profiles page.



The WiFi Profiles page displays the following information:

- **Current Profile** — The currently connected profile.
- **Selected Profile** — The profile you are modifying.
- **Network Name (SSID)** — Name of the network you are connected to. You can change the name to something more descriptive if you want, or if other devices are in use nearby.
- **802.11 Mode** — The type of wireless networking you are currently using.
- **Channel** — The radio channel that the device is using. The default setting is Auto. Available channels are 1 through 11.
- **Security** — The type of security used for this profile.
- **Authentication** — Locked to Open Access for all profiles.
- **Network Key** — Passcode or password used to access the network. The required format varies by type of security.

Choose a Profile

► Select a profile from the Selected Profile List and click **Apply**.

- Secure — This is the profile you should use most of the time. You can set up this profile with the security measures you need to use your MiFi safely.
- Temporary Hotspot — This profile allows you to set up a secure temporary hotspot by generating a temporary network name and password (key) that can be shared with others (up to five) to allow them to connect to your MiFi on a temporary basis.
- Open — This profile does not require a password to connect to your MiFi. Any user who can see your network name (SSID) can connect to your MiFi.

Change Security Settings

Tip!

Some Wi-Fi clients become confused if the security is changed and the network name is not. If you change security settings and do not get asked for the new network key (password) when you try to reconnect, delete the existing "old" network name from your "Preferred Networks" list. Then you can reconnect.

IMPORTANT Record your network key (password).

- ① From the Selected Profile list, select **Secure**.
- ② If desired, change the Network Name.
- ③ Select a security protocol from the Security list.
- ④ Enter a new network key (password) in the Network Key box. (Permissible characters are listed in gray just under the box.)
- ⑤ Click **Update Profile** to change the profile without changing your current network connection.
– OR –
- ⑤ Click **Apply** to save your changes and immediately apply them to your network connection.

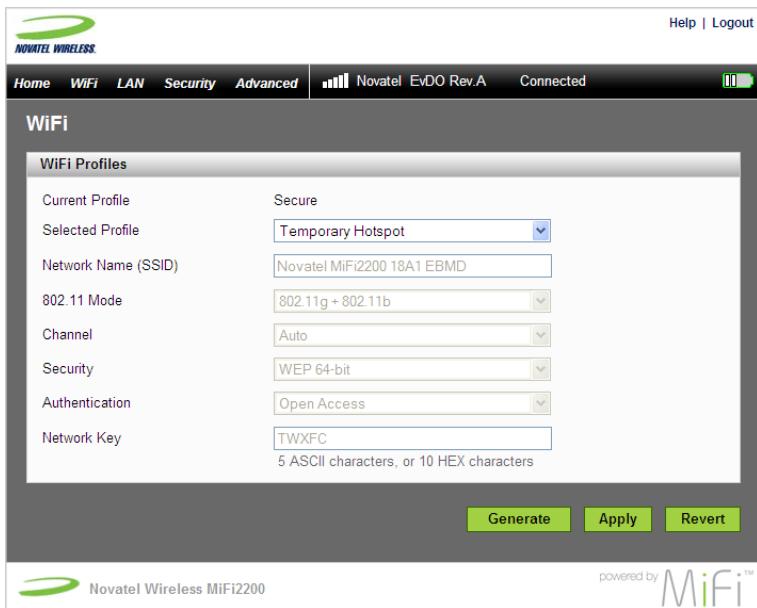
You will lose your current network connection and have to reconnect using your new network name and key (password).

Set Up a Temporary Hotspot

You can set up a temporary network name and key (password) to allow a maximum of five connections to your MiFi 2200 at one time.

This profile generates a temporary network name and network key (password) that you can use to allow others to connect to your MiFi without having to provide the settings for your secure profile.

- 1 From the WiFi Profiles page, select Temporary Hotspot as the Selected Profile.



You will see a new (temporary) network name (SSID) and network key (password). In the example shown above, the temporary network name is "Novatel MiFi2200 18A1 EBMD" and the temporary network key is "TWXFC."

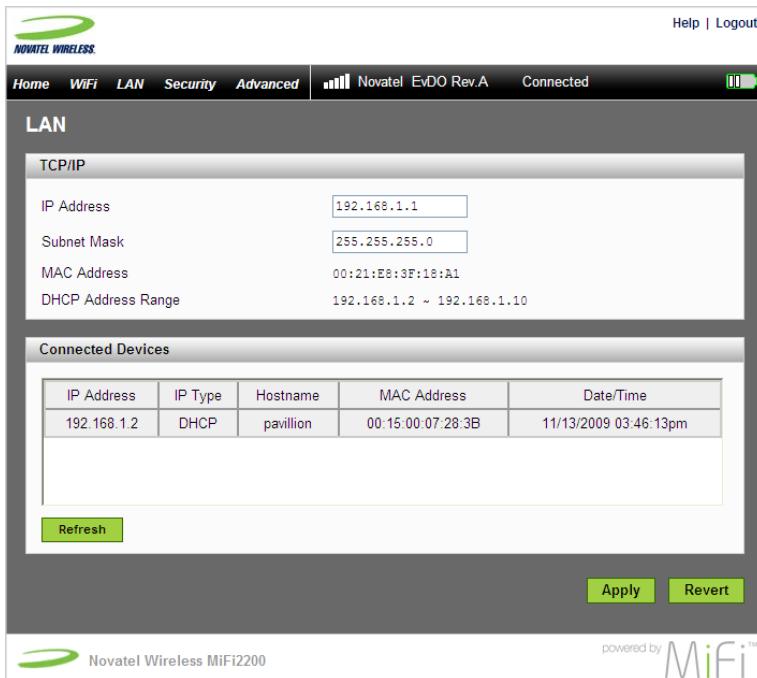
- 2 Click **Apply**. Up to five other devices can now use the temporary network name and network key (password) to connect to your MiFi.

Tip! Click **Generate** to create a different network name and key (password).

LAN

The LAN page provides information about your MiFi and the devices that are connected to it.

► Choose **LAN** from the menu bar to open the LAN page.



The LAN page is divided into two sections:

TCP/IP

The TCP/IP section shows the MAC address and local network IP address information for your MiFi.

- Local IP address
- Subnet mask
- MAC address of the MiFi device
- DHCP address range used by the device's DHCP server.

► Change the IP address and subnet mask by entering new numbers and clicking **Apply**.
If you have devices with local static IP addresses, those addresses should not be within the DHCP range.

Connected Devices

The Connected Devices section lists the devices that are currently connected to your MiFi. This is another way you can find the MAC address for a particular device.

Security

The Security menu allows you to change the administrative password, set MAC filters, and set up port filtering.



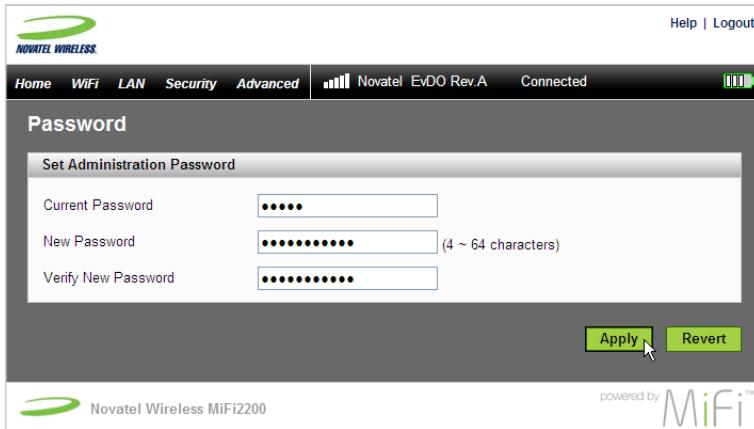
The Security menu has three components:

- [Password](#) — to change the administrative password that provides access to MiFi Settings.
- [MAC Filter](#) — to allow only certain devices to connect to the MiFi device.
- [Port Filtering](#) — to specify which application can access the Internet and through which port(s).

Password

The Password page allows you to change the administrative password that provides access to MiFi Settings.

- ① Choose **Password** from the Security menu.



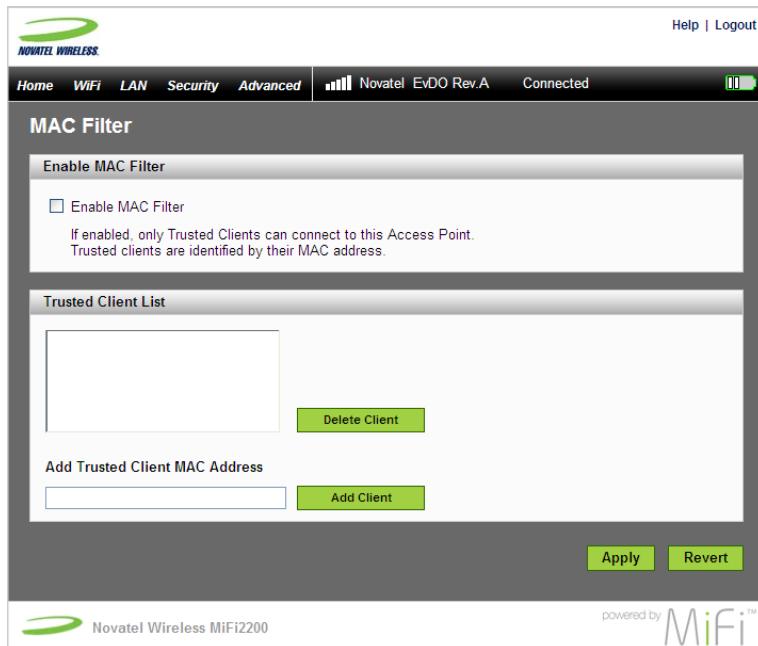
- ② Type the current password in the Current Password box.
- ③ Type the new password (must have 4 to 64 characters) in the New Password box and then again in the Verify New Password box.
- ④ Click **Apply**.

MAC Filter

MAC filtering allows you to limit access to your MiFi to only those devices with a specific MAC address (a unique code assigned to hardware such as network adapters).

This section contains the following information:

- [Find the MAC Address](#)
- [Use MAC Filtering](#)



IMPORTANT Do not enable MAC filtering unless you have added your own MAC address to the trusted client list. Otherwise you will be unable to access the device.

Find the MAC Address

The MAC Address is also known as a hardware or physical address for a device, usually a network adapter. It consists of six pairs of numbers and letters (for example, 00-21-9B-1C-64-34).

You can view the MAC address for any device connected to the MiFi device in the Connected Devices section of the LAN page. [See [LAN](#) (page 28).]

- Under Windows, you can find the MAC address by running "ipconfig /all" from the cmd window. The MAC address is referred to as the Physical Address. (Select **Start > All Programs (or Programs) > Accessories > Command Prompt** to open the cmd window.)

IMPORTANT Make sure you get the MAC address for the wireless network adapter and not the Ethernet controller (NIC) if the machine has both.

- On a Mac, open **System Preferences > Network**. In the Show list, click **Airport**. The MAC address is the Airport ID.

Use MAC Filtering

- 1 From the MAC Filter page, type the MAC address for your computer into the Add Trusted Client MAC Address box and click **Add Client**.

You can use either ":" or "-" as the separator (for example, 00:21:9B:1C:64:34 or 00-21-9B-1C-64-34).

Tip!

You can cut-and-paste your computer's address from the Connected Devices section of the LAN page. [See [LAN](#) (page 28).]

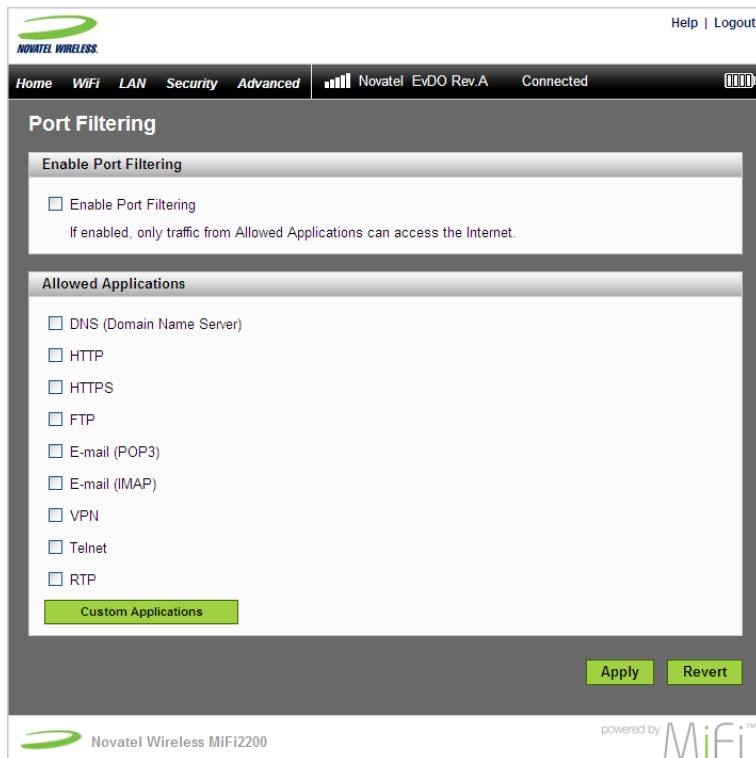
- 2 If desired, type the MAC address for other computers into the Add Trusted Client MAC Address box and click **Add Client**.
- 3 Select the Enable MAC Filter check box and click **Apply**.

Port Filtering

Port filtering allows you to enhance the security of your system by controlling which applications are allowed to access the Internet. For example, port filtering can prevent non-business applications from accessing the Internet.

This section contains the following information:

- Port Filtering for Standard Applications — for standard applications using standard ports
- Port Filtering for Custom Applications — for unlisted applications or non-standard ports



Port Filtering for Standard Applications

- 1 From the Port Filtering page, select the Enable Port Filtering check box.
- 2 Select the check boxes for the applications you want to allow access to the Internet.
- 3 Click **Apply**.

NOTE The device uses standard ports for these applications. If you have applications that do not use the standard ports or that are not listed under Allowed Applications, use Custom Applications.

Port Filtering for Custom Applications

To set up port filtering for a custom application, you will need to know the port numbers (up to five ports or port ranges) and the protocol (TCP, UDP, or both) the application uses for its outgoing traffic.

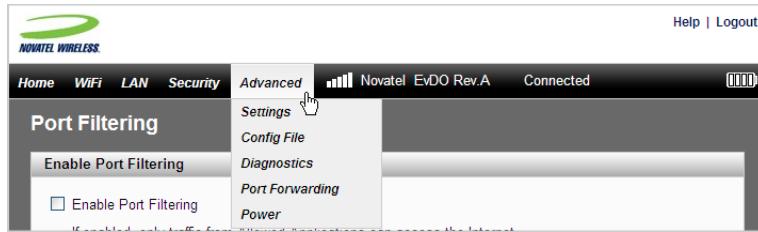
- 1 On the Port Filtering page, select the Enable Port Filtering check box.
- 2 Click **Custom Applications**.
- 3 Enter a name for the application and click the **Ports** link.

The screenshot shows the 'Custom Port Filtering' interface. In the 'Custom Applications' section, 'Game' is selected with a checked checkbox. The 'Ports for Application 1' table shows a single entry: port 8080 to 8080 assigned to TCP/UDP. There are five empty application slots numbered 2 through 6. At the bottom are 'Apply' and 'Revert' buttons, with 'Apply' being highlighted.

- 4 Enter the port or port range. You can enter up to five ports or port ranges for each application.
- 5 For each port number or range, select the protocol (TCP, UDP, or both) used by that port or port range.
- 6 Click **Hide**.
- 7 Click **Apply**.

Advanced

The Advanced menu allows you to back up and restore your configuration, set up port forwarding, view status information about your MiFi, and customize its power-saving settings.

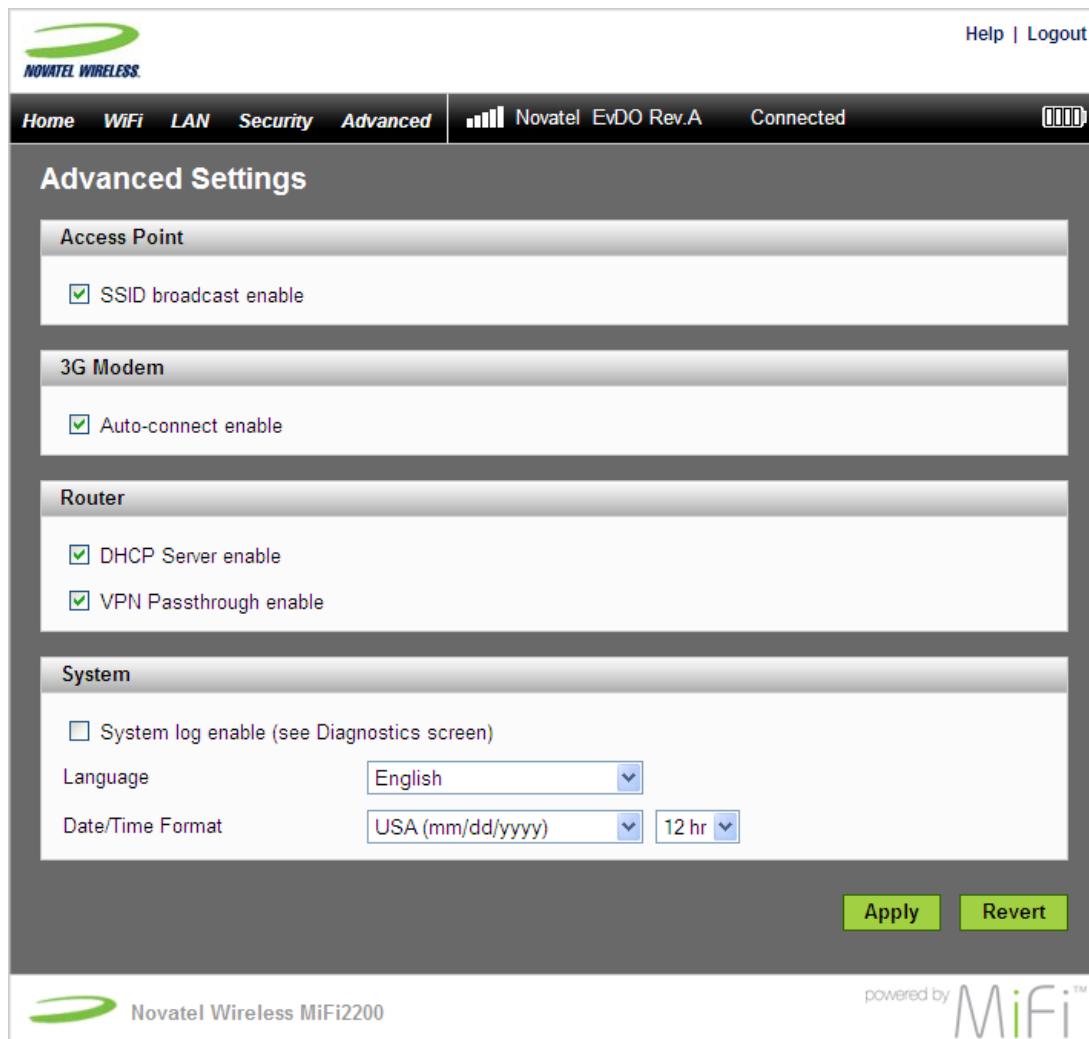


The Advanced menu has five components:

- [Settings](#) — to enable SSID broadcasting, auto-connecting the modem, DHCP server, VPN passthrough, and the system log. You can also set the language for the MiFi Settings pages and the date and time format.
- [Config File](#) — to back up or restore a file containing your MiFi settings.
- [Diagnostics](#) — to view information about your MiFi, the modem status, and the system log. You can also view estimates of usage, restart your device, or reset it to factory defaults.
- [Port Forwarding](#) — to specify which applications can access your computer through the Internet and through which port(s). You might use this if you have an FTP server on your system or play certain online games.
- [Power](#) — to customize the device's power-saving settings.

Settings

Click Settings in the Advanced menu to configure your device or to enable the system log.



The Advanced settings page is divided into four sections.

Access Point

Enabling SSID broadcasting allows other nearby computers to see your device's network name (SSID). This is what you see when you select "View Available Wireless Networks."

Disabling SSID broadcasting provides additional security but you will have to re-enable it if you lose your automatic connection.

- Select the SSID broadcast enable check box to enable SSID broadcasting, or clear the check box to disable SSID broadcasting, and then click **Apply**.

3G Modem

Enabling auto-connect allows your device to connect to the network automatically when it is turned on.

- Select the Auto-connect enable check box to enable auto-connection, or clear the check box to disable auto-connection, and then click **Apply**.

Router

Enabling the DHCP server allows the device to automatically assign a local IP address to a new device joining your network (such as a wireless printer or an additional laptop). When the DHCP server is disabled, you will have to assign static IP addresses to all devices on your network.

- Select the DHCP Server enable check box to enable the DHCP server, or clear the check box to disable the DHCP server, and then click **Apply**.

VPN passthrough is required if you are going to connect to a VPN (such as a corporate system).

- Select the VPN Passthrough enable check box to enable VPN passthrough, or clear the check box to disable VPN passthrough, and then click **Apply**.

System

The System section allows you to select the language and the date and time format you prefer and to turn on the system log.

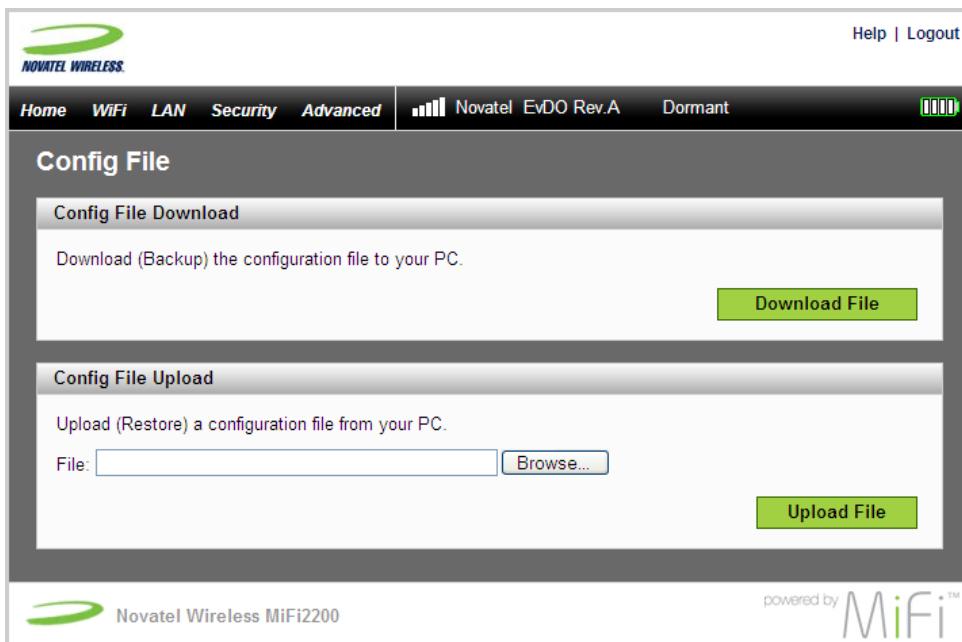
NOTE

You can view the system log from the Diagnostics page. [See [Diagnostics](#) (page 37).]

- ① In the Language list, click the language you wish to use.
- ② In the Date/Time list, click the date format (U.S. or European) and the time system (12-hr or 24-hr) that you want to use.
- ③ Optionally, you can select the System log enable check box if you want to create a system log.
- ④ Confirm your selections and click **Apply**.

Config File

Click Config File in the Advanced menu to back up your configuration file (device settings) to your computer, or to restore a saved configuration file from your computer.



The Config File page is divided into two sections.

Config File Download

To back up your device's configuration file to your computer:

- ① Click **Download File**.
- ② **Mac:** The file, "config.xml.sav", is downloaded to your desktop. Copy the file to a safe location. You may rename the file.

Windows: Click **Save** to place the file "config.xml.savefile" on your computer. You may rename the file. (If the file opens in your browser instead of downloading, use your browser's File menu to save the file to your computer.)

Config File Upload

To restore a configuration file backed up on your computer to your device:

- ① Click **Browse / Choose File**.
- ② Locate the file on your hard drive then click **Open / Choose**.
- ③ Click **Upload File**.

IMPORTANT If your WiFi settings have changed since you created a backup file, you will lose your connection after restoring from the backup file. You will need to reconnect using the new (changed) settings.

Diagnostics

Click Diagnostics in the Advanced menu to view information about your MiFi, the modem status, and the system log. You can also view estimates of usage, restart your device, or reset it to factory defaults.

Novatel Wireless

Help | Logout

Home WiFi LAN Security Advanced Novatel EvDO Rev.A Dormant

Diagnostics

System Information

AP/Router	3G Modem	Version
Manufacturer: Novatel Wireless	ESN: [redacted]	AP: 11.47.17
Model: MiFi2200	MDN: [redacted]	Router: 084
Serial No: [redacted]		Modem: 139

System Status

Modem Status

System Log

Global Traffic Counters

These counter are approximate and not used for billing purposes.

Start Date:	11/09/2009 09:46:43am
Total connection time:	00:48:42
Data Received:	374.67 MB
Data Transmitted:	7.98 MB
Total Data:	382.65 MB

Restart

Reset to Factory Defaults

Novatel Wireless MiFi2200

powered by **MiFi**™

The Diagnostics page is divided into four sections.

System Information

The System Information section provides information about your MiFi. This information includes the following:

- Manufacturer
- Model
- Serial Number
- ESN
- MDN
- AP Version Number
- Router Version Number
- Modem Version Number

System Status

The System Status section can show information useful for troubleshooting.

- Click **Modem Status** to see the status information related to the device and the connection, including ERI version and PRL ID.
- Click **System Log** to see a log of connections, including destination IP address and port.

The System Log must be enabled on the Settings page. [See [Settings](#) (page 34).]

Global Traffic Counters

Restart / Reset

You can restart your MiFi from this page.

- Click **Restart** to reset your MiFi (as if you turned the power off then on again).

IMPORTANT Your Internet and WiFi connections will be lost and you will have to reconnect.

- Click **Reset to Factory Defaults** to set all settings back to factory values.

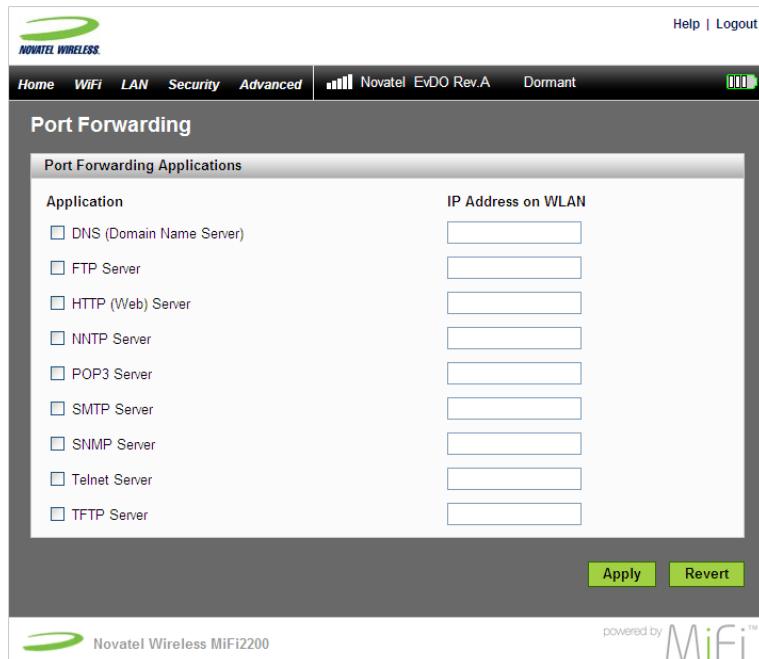
IMPORTANT

- Your Internet and WiFi connections will be lost and you will have to reconnect.
- In addition, you will have to reconfigure your profiles.

Port Forwarding

Incoming traffic from the Internet is normally prevented by the firewall from reaching devices on your local wireless network. Use port forwarding to allow Internet users to reach any server you are running on your computer, such as an FTP server. Also, some online games require incoming access to work properly.

IMPORTANT You will need to set up static IP addresses on your WLAN for each device that has an application you want to forward to.

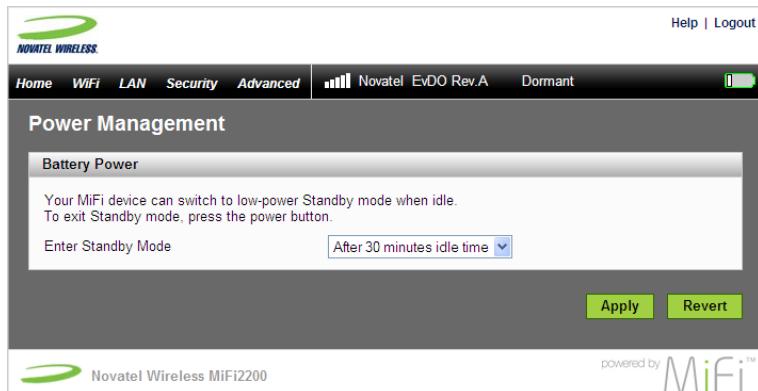


- 1 Choose **Advanced>Port Forwarding** from the menu bar.
- 2 Select the check box for the application you want to enable.
- 3 Enter the local static IP address of the device hosting the application in the **IP Address on WLAN** box.
- 4 Click **Apply** when you have finished adding applications.

IMPORTANT Port forwarding creates a security risk and should be disabled when not needed.

Power

Your MiFi can switch to a low-power mode when it is idle and running on battery power. The Power Management page allows you to set the timing before your MiFi switches to low-power mode.



- 1 Choose **Power** from the Advanced menu.
- 2 In the Battery Power section, select the time that elapses before your MiFi switches to low-power mode when not in use (2 to 60 minutes) or select **Never** to disable this feature.
- 3 Click **Apply**.

4

Troubleshooting

[Overview](#)
[Common Problems and Solutions](#)
[Use the Master Reset Button](#)
[Technical Support](#)

Overview

The following tips will help solve problems that might be encountered while using the MiFi 2200:

- Make sure you are using the MiFi 2200 in the correct geographic region.
- Ensure that the wireless network's coverage extends to your current location.
- If you are using the MiFi in USB Modem Mode, simply unplugging and replugging in the USB cable can resolve many issues.
- If you are using the MiFi in WiFi Mode, power it off and then on again.

When properly installed, the MiFi 2200 is a highly reliable product. Most problems are caused by one of these issues:

- System resources required by the MiFi 2200 are being used by other devices. (Rebooting your computer will often clear this up.)
- Network coverage is not available (either because you are outside the coverage area of your network operator or because of an account or network problem).

Common Problems and Solutions

The following are some common problems and solutions.

No service is available.

- OR -

I get a “Limited or No Connectivity” message.

- ▶ You are outside of the coverage area.
- ▶ Check with your network operator – there may be a problem with your account.
- ▶ Reorient MiFi.
- ▶ If you are inside a building or near a structure that may be blocking the signal, change the position or location of the device. For example, try moving MiFi close to a window.

The device has no power.

The LED indicator is off and does not come on when the Power button is pressed.

- ▶ Ensure the battery is properly seated in the device.
- ▶ Ensure the battery is fully charged. Plug in the wall charger for at least 2.5 hours.

My MiFi powered off once I plugged it into the wall charger.

This can occur if power settings are activated after it is plugged in.

- ▶ Press the power button to turn it back on.

My MiFi just powered off without my pressing the power button.

This can occur in the following situations.

- Pressing the Master Reset button
- Restarting the device
- Switching profiles
- Restoring the configuration settings
- Battery depleted

▶ Press the power button to turn it back on.

I forgot my password.

- ▶ You can reset the device to factory defaults using the master reset button. [See [Use the Master Reset Button](#) (page 46).]

I cannot connect to MiFi in Wi-Fi mode.

- ① Make sure the LEDs are on.
If the LEDs are not on, check your battery.
- ② Make sure your wireless radio / AirPort is turned on. (Check your computer help if you need assistance.)
- ③ Open your wireless network connection list.
 - Windows: Right-click icon and select **View Available Networks**.
 - Mac: Pull down list from AirPort icon.
- ④ Select the MiFi 2200 network name (in Windows, click **Connect**).

When the MiFi is connected to the network, the status LED begins to blink.

My network does not appear in the wireless network list.

- Verify that the MiFi LEDs are on and are not showing an error condition. [See LED Indicators (page 8).]
- Refresh your network list.
 - Windows: Click **Refresh Network List** on the left side of the Wireless Network Connection screen. If that does not work you can try the following:
 1. Open **Network Connections**.
 2. Right-click **Wireless Network Connection** and select **Properties**.
 3. Click the **Wireless Networks** tab.
 4. Delete any unused wireless connections from the Preferred Networks list and click OK.
 5. Restart your computer.
 - Mac: Try rebooting your computer.

I get a message that MobiLink 3 cannot be installed when I try to use MiFi in USB Modem mode.

- You might not have administrative privileges. Contact your system administrator or log on to your computer as an administrator and try plugging it in again.

How do I disconnect from the network?

- WiFi Mode:
 - Use your computer network manager.
-OR-
 - Login to MiFi Settings and click **Disconnect**.
 1. Open your web browser and enter <http://192.168.1.1> into the address window.
 2. Then type your administrative password into the login window and click **Login**.
 3. Click the **Disconnect** button.

- USB Modem Mode (Windows):
 - Right-click the status icon in the notification area and select **Disconnect**.
- USB Modem Mode (Mac):
 - Click the status icon in the menu bar and select **Disconnect**.

How can I find out how many users are connected to the MiFi 2200?

Open MiFi Settings (<http://192.168.1.1>). The number of devices (users) currently connected to MiFi is in the WLAN section at the bottom of the screen.

Can I use MiFi as a tethered modem with my computer?

Yes. Simply plug it in with the microUSB cable and use the MobiLink software.

How can I check the battery level of MiFi?

Open MiFi Settings (<http://192.168.1.1>). The battery status icon is displayed in the menu bar.

Can I backup my configuration settings?

Yes. Login to MiFi Settings and choose **Advanced >Config File**. Click **Download File**. [See [Config File](#) (page 36).]

How do I turn off MiFi?

Press and hold the Power button for 5 seconds until the LEDs turn off.

What is the default administrative/login password?

“admin”

I am having trouble connecting to my office VPN.

Login to MiFi Settings and choose **Advanced >Settings**. Select the VPN Passthrough enable checkbox and click **Apply**. [See [Settings](#) (page 34).]

Use the Master Reset Button

The MiFi 2200 comes with a master reset button that allows you to return it to its factory default state.

The master reset button is recessed in a hole on the back of the device. You will need a paperclip or similar object to push the button.

- ① Make sure the MiFi is powered on.
- ② Locate the master reset button on the back of the device.



- ③ Insert a paperclip into the hole and hold the button down for 5 seconds until the Power LED goes off.

Your list of wireless networks will now show the original default network when you first configured your device.

- ④ Connect to MiFi again.

Technical Support

For additional information and technical support for MobiLink and the MiFi 2200, visit the Novatel Wireless website at:

<http://www.novatelwireless.com/support>

Technical Information

Product Specifications
Regulatory Notices
Safety Hazards
Limited Warranty and Liability

Product Specifications

General

Name	Novatel Wireless MiFi 2200
Model	MiFi 2200
Approvals	COFETEL, NOM, CDG
Weight	58 g / 2.05 oz
Dimensions	90 mm x 60 mm x 8.8 mm 3.54 in x 2.36 in x 0.35 in
Wireless Network—Dual Mode	CDMA 1X/EV-DO
Wireless Network – Wi-Fi Mode	802.11 b/g
Default SSID	Novatel MiFi2200 (plus the last 4 digits of the MAC address)
Battery	
Size	1150 mAh
Time for full charge: AC Charger	2.5 hours (when not in use)
Time for full charge: computer USB Cable	7-8 hours (when not in use)
Chip Set	QUALCOMM™ QSC6085
Interface Type	Type A USB Port for computer microUSB for device (cable included)

CDMA Technology/Bands

Technology	CDMA Rev A, Rev 0, 1XRTT
Band Designation	800/1900 MHz
Transmit Band	824.7–848.31MHz/1851.25–1908.75MHz
Receive Band	869.7–893.31MHz/1931.25–1988.75MHz

Environmental

Operating Temperature	–10° C to 45° C (14° F to 113° F)
Storage Temperature	–20° C to 65° C (–4° F to 149° F)
Drop	3.28 feet drop, no damage—fully operational
Vibrational Stability	5 Hz to 500 Hz, 0.1 octave/second

Regulatory Notices

CE Marking

This device has been tested to and conforms to the essential regulatory requirements of the European Union R&TTE directive 1999/5/EC and has attained CE Marking.

CE 0682

Federal Communications Commission Notice (FCC – United States)



This equipment has been tested to, and found to be within the acceptable limits for a Class B digital device, pursuant to part 15 of the FCC Rules and Industry Canada ICES-003. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential environment.

This equipment generates radio frequency energy and is designed for use in accordance with the manufacturer's user manual. However, there is no guarantee that interference will not occur in any particular installation. If this equipment causes harmful interference to radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

This device complies with Part 15 of the Federal Communications Commission (FCC) Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

CAUTION DO NOT ATTEMPT TO SERVICE THE WIRELESS COMMUNICATION DEVICE YOURSELF. SUCH ACTION MAY VOID THE WARRANTY. The MiFi 2200 DEVICE IS FACTORY TUNED. NO CUSTOMER CALIBRATION OR TUNING IS REQUIRED. CONTACT YOUR SERVICE PROVIDER FOR INFORMATION ABOUT SERVICING YOUR WIRELESS COMMUNICATION DEVICE.

NOTICE TO CONSUMERS: Any changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

NOTE: The Radio Frequency (RF) emitter installed in your modem must not be located or operated in conjunction with any other antenna or transmitter, unless specifically authorized by Novatel Wireless Technologies.

MODIFICATIONS: The FCC requires that you be notified that any changes or modifications made to this device that are not expressly approved by your service provider may void your authority to operate the equipment.

This device is approved for use in normal size notebook computers only (typically with 12" or larger display screens). To comply with FCC RF exposure requirements, this modem should not be used in configurations that cannot maintain at least 1 cm (approximately 0.393" or 10 mm) from users and bystanders; for example, in certain notebook and tablet computers and configurations where the connectors are unable to provide or ensure the necessary separation is available between the modem and its users to satisfy RF exposure compliance requirements.

RF Exposure

FCC Equipment Authorization ID: PKRNVWMiFi2200

This device is only authorized for use in mobile applications. At least 20 cm (8 inches) of separation between the antenna and the user's body must be maintained at all times.

Safety Hazards

Do not use your MiFi 2200 in an environment that may be susceptible to radio interference resulting in danger, specifically;

Areas where prohibited by the law

Follow any special rules and regulations and obey all signs and notices. Always turn off MiFi (or the host device and remove the modem from the USB port) when instructed to do so, or when you suspect that it may cause interference or danger.

Where explosive atmospheres may be present

- Do not operate your modem in any area where a potentially explosive atmosphere may exist. Sparks in such areas could cause an explosion or fire resulting in bodily injury or even death. Be aware and comply with all signs and instructions.
- Users are advised not to operate the modem while at a refueling point or service station. Users are reminded to observe restrictions on the use of radio equipment in fuel depots (fuel storage and distribution areas), chemical plants or where blasting operations are in progress.
- Areas with a potentially explosive atmosphere are often but not always clearly marked. Potential locations can include gas stations, below deck on boats, chemical transfer or storage facilities, vehicles using liquefied petroleum gas (such as propane or butane), areas where the air contains chemicals or particles, such as grain, dust or metal powders, and any other area where you would normally be advised to turn off your vehicle engine.

Near medical or life support equipment

Do not operate your MiFi 2200 in any area where medical equipment, life support equipment, or near any equipment that may be susceptible to any form of radio interference. In such areas, the host communications device must be turned off. The MiFi 2200 may transmit signals that could interfere with this equipment.

On an aircraft, either on the ground or airborne

In addition to FAA requirements, many airline regulations state that you must suspend wireless operations before boarding an airplane. Please ensure that MiFi is powered off (if in USB mode, your MiFi is removed from the USB port) prior to boarding aircraft in order to comply with these regulations. The MiFi 2200 can transmit signals that could interfere with various onboard systems and controls.

While operating a vehicle

The driver or operator of any vehicle should not operate a wireless data device while in control of a vehicle. Doing so will detract from the driver or operator's control and operation of that vehicle. In some countries, operating such communications devices while in control of a vehicle is an offense.

SAR Levels

The FCC has granted an Equipment Authorization for this wireless modem with all reported SAR levels evaluated as in compliance with the FCC RF exposure guidelines.

Proper Battery Use and Disposal

WARNING!

- Never dispose of batteries in a fire because they might explode.

In the event of a battery leak:

- Do not allow the liquid to come in contact with the skin or the eyes. If contact is made, wash the affected area with large amounts of water and seek medical advice.
- Seek medical advice immediately if a battery has been swallowed.

Contact your local recycling center for proper battery disposal

Guidelines for Safe and Responsible Battery Use

- Do not disassemble or open, crush, bend or deform, puncture, or shred.
- Do not modify or remanufacture, attempt to insert foreign object into the battery, immerse or expose to water or other liquids, or expose to fire, explosion, or other hazard.
- Only use the battery for the system for which it was specified.
- Only use the battery with a charging system that has been qualified with the system per this standard. Use of an unqualified battery or charger may present a risk of fire, explosion, leakage, or other hazard.
- Do not short circuit a battery or allow metallic or conductive object to contact the battery terminals.
- Replace the battery only with another battery that has been qualified with the system per this standard. Use of an unqualified battery may present a risk of fire, explosion, leakage, or other hazard.
- Promptly dispose of used batteries in accordance with local regulations.
- Battery usage by children should be supervised.
- Avoid dropping the device or battery. If the device or the battery is dropped, especially on a hard surface, and the user suspects damage, take it to a service center for inspection.
- Improper battery use may result in a fire, explosion, or other hazard.

Limited Warranty and Liability

Novatel Wireless, Inc. warrants for the 12 month period immediately following receipt of the Product by Purchaser that the Product will be free from defects in material and workmanship under normal use. THESE WARRANTIES ARE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE

The exclusive remedy for a claim under this warranty shall be limited to the repair or replacement, at Novatel Wireless' option, of defective or non-conforming materials, parts or components. The foregoing warranties do not extend to (I) non conformities, defects or errors in the Products due to accident, abuse, misuse or negligent use of the Products or use in other than a normal and customary manner, environmental conditions not conforming to Novatel Wireless' specification, of failure to follow prescribed installation, operating and maintenance procedures, (II) defects, errors or nonconformity's in the Product due to modifications, alterations, additions or changes not made in accordance with Novatel Wireless' specifications or authorized by Novatel Wireless, (III) normal wear and tear, (IV) damage caused by force of nature or act of any third person, (V) shipping damage, (VI) service or repair of Product by the purchaser without prior written consent from Novatel Wireless, (VII) products designated by Novatel Wireless as beta site test samples, experimental, developmental, reproduction, sample, incomplete or out of specification Products, or (VIII) returned products if the original identification marks have been removed or altered.

6

Glossary

Glossary

- **1xRTT** — Short for single carrier (1x) Radio Transmission Technology. A high speed wireless technology based on the CDMA platform. 1xRTT has the capability of providing broadband-like speeds of up to 144 Kbps. 1xRTT is also referred to as CDMA2000.
- **1xEVDO** — Part of a family of CDMA2000 1x digital wireless standards. 1xEVDO is a “3G” standard. EVDO stands for “EVolution, Data-Optimized.” 1xEVDO is based on a technology initially known as “HDR” (High Data Rate) or “HRPD” (High Rate Packet Data), developed by Qualcomm. The international standard is known as IS-856. 1xEVDO has the capability of providing broadband-like speeds of average speeds of 400-700 kbps.
- **bps** — bits per second. Rate of data flow.
- **Broadband** — High-capacity high-speed, transmission channel with a wider bandwidth than conventional modem lines. Broadband channels can carry video, voice, and data simultaneously.
- **Computing Device** — Personal computing device (notebook, desktop computer, tablet PC, PDA, etc).
- **Kbps** — Kilobits per second. Rate of data flow
- **LAN** — Local Area Network. A data network confined to limited area with moderate to high data rates. Does not use common carrier circuits, although may have gateways or bridges to other public or private networks.
- **microUSB** — microUSB is not to be confused with miniUSB. The microUSB technology features a small and durable form factor for frequent use. microUSB was developed by the USB Implementers Forum, Inc. (USB-IF), an independent non-profit group that works to advance USB technology.
- **Mbps** — Megabits per second. Rate of data flow
- **Rev A** — CDMA EV-DO Rev. A is a leading-edge wireless technology with higher data rates and higher system capacity. It is a fully backward compatible standard and remains interoperable with deployed EV-DO networks and devices around the world. The increased data rates on Rev. A’s physical layer enable richer applications and services. For more information, visit www.cdg.org.
- **SMS** — Short Messaging Service. Short text messages of generally no more than 140-160 characters sent and received by wireless devices.
- **Tethered Modem** — Refers to using MiFi 2200 connected to your computer with a USB cable instead of wirelessly.
- **Type A USB** — The USB ports on computers and hubs have a rectangular Type A socket, and peripheral devices have a cable with a Type A plug. Peripherals that do not have an attached cable have a square Type B socket on the device and a separate cable with a Type A and Type B plug.
- **USB** — Universal Serial Bus. A connection type for computing device peripherals such as a printer, mouse, keyboard, etc.
- **VPN** — Virtual Private Network. A secure private network that runs over the public Internet.
- **WAN** — Wide Area Network. A computer network covering a broad geographical area. WANs are used to connect local area networks (LANs) together, so that users and computers in one location can communicate with users and computers in other locations.

- **Wi-Fi** — Wireless Fidelity. Refers to any system that uses the 802.11 standard, which was developed by the Institute of Electrical and Electronics Engineers (IEEE) and released in 1997.
- **WLAN** — Wireless Local Area Network. A wireless form of a local area network. See LAN.
- **WWAN** — Wireless Wide Area Network. Also called “wireless broadband” or “broadband wireless,” wireless WANs (WWANs) use cellular towers to transmit a wireless signal over a range of several miles to a mobile device compared to wireless Wi-Fi LANs (WLANs), which span only a few hundred feet and generally to only stationary devices.